CLAIMS:

1. A porous body comprising a number of base particles adhering to one another with an adhesion material having a lower melting point than the melting point of said base particles.

2. A porous body comprising a number of base particles adhering to one another with an adhesion material having a lower melting point than the melting point of said base particles,

wherein said adhesion material exists on surfaces of said base particles and on boundary faces of said base particles and a surface area to volume ratio of a space between said base particles is larger than the surface area to volume ratio of the space formed only from said base particles.

3. The porous body according to claim 1 or claim 2,

wherein a larger amount of said adhesion material adheres to contact portions or most adjacent portions of said base particles which are the surfaces of said base particles exposed in the space formed between the base particles, and a smaller amount of said adhesion material exists on the remaining surfaces as a plurality of island-shaped dots.

4. The porous body according to any one of claim 1 to claim 3,

wherein said adhesion material is a metal.

5. The porous body according to claim 4,

wherein said base particle is iron and said adhesion material is copper.

6. A method for producing a porous body, comprising the steps of:

mixing a number of base particles composing the porous body, and an adhesion material for causing the base particles to ahhere to one another, the adhesion material having a lower melting point than the melting point of the base particle; and

heating the mixture, which is obtained by said mixing step, in a state being in a container,

wherein the base particles are caused to adhere to one another with the adhesion material in said heating step.

7. A method for producing a porous body, comprising the steps of:

coating a number of base particles composing the porous body with an adhesion material having a lower melting point than the melting point of the base particle; and

heating composite particles, which are obtained by said coating step, in a state being in a container,

wherein the base particles are caused to adhere to one another with the adhesion material in said heating step.

8. The method for producing the porous body according to claim 7,

wherein said coating step is a step for coating surfaces of the base particles with the adhesion material by plating.

9. The method for producing the porous body according to any one of claims 6 to claim 8,

wherein the container is a container for forming a flat plate, and

said method for producing the porous body further comprising the step of forming the flat plate obtained after said coating step and said heating step, which are performed to the mixture or the composite particles in a state being in

the container, into a cylindrical shape.

10. The method for producing the porous body according to any one of claim 6 to claim 9,

wherein the base particle is iron and the adhesion material is copper.

11. A method for producing a porous body, comprising the steps of:

reducing by heating a number of base particles composing the porous body under a reducing gas atmosphere;

brazing surfaces of the base particles with an adhesion material having a lower melting point than the melting point of the base particle; and

heating a mixture which is obtained by said brazing step and inputted into a container,

wherein the base particles are caused to adhere to one another with the adhesion material in said heating step.

12. The method for producing the porous body according to claim 11,

wherein the container is a container for forming a flat plate, and

the method for producing the porous body further comprising the step of forming the flat plate obtained after said heating step, which is performed to the mixture in a state being in the container, into a cylindrical shape.

13. The method for producing the porous body according to claim 11 or claim 12,

wherein the base particle is iron, the adhesion material is copper, and the reducing atmosphere gas is hydrogen.